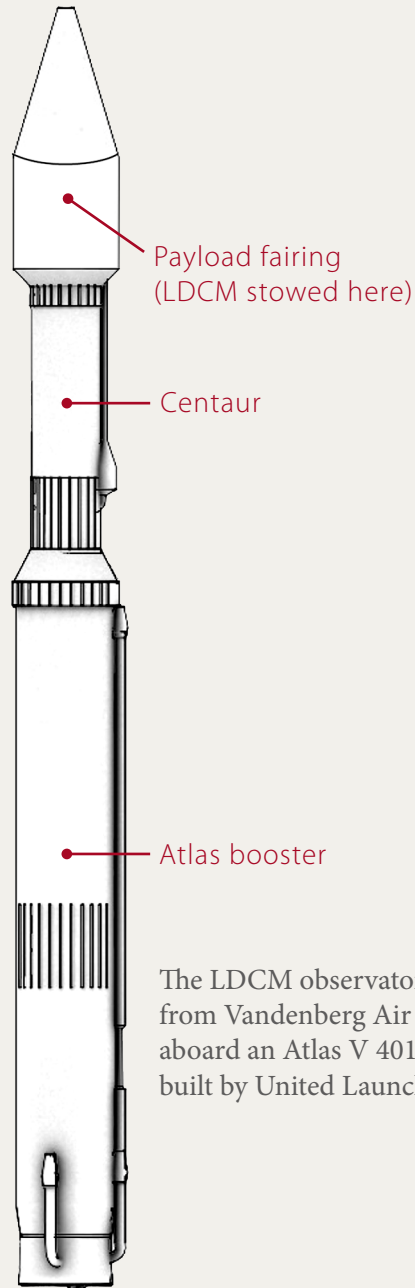


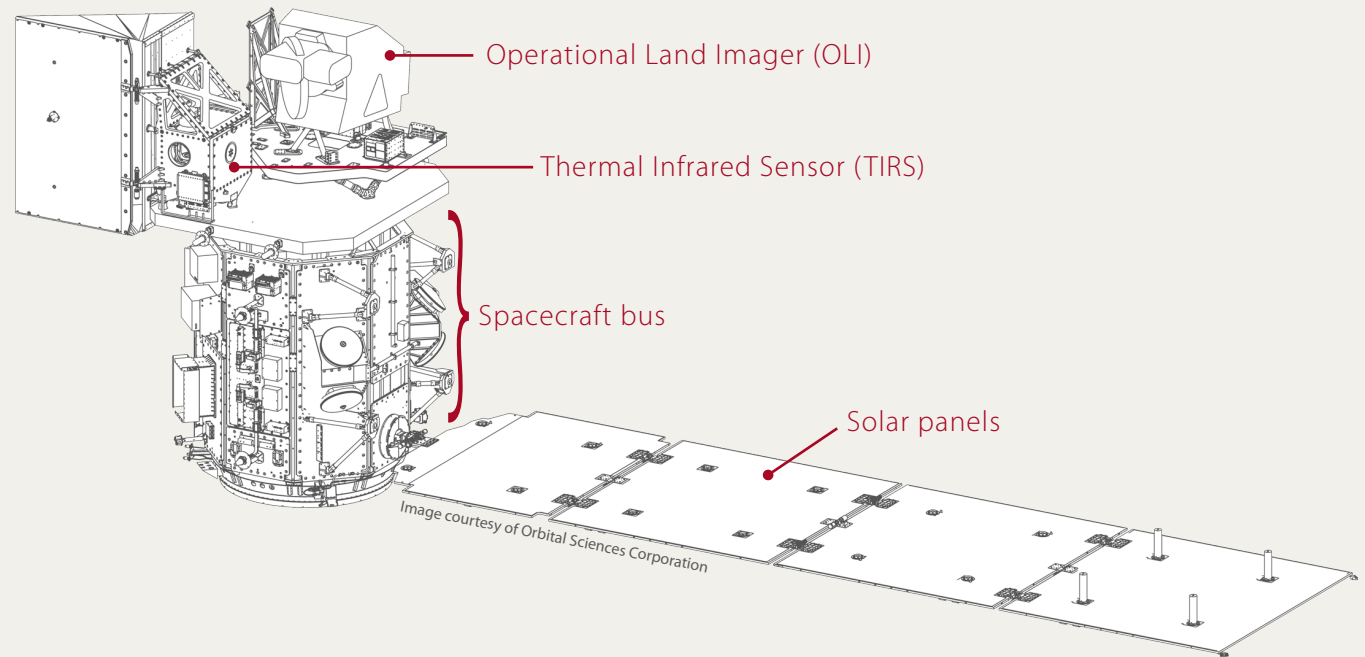
The LDCM

The Rocket



The LDCM observatory will launch from Vandenberg Air Force Base aboard an Atlas V 401 launch vehicle built by United Launch Alliance.

The Spacecraft

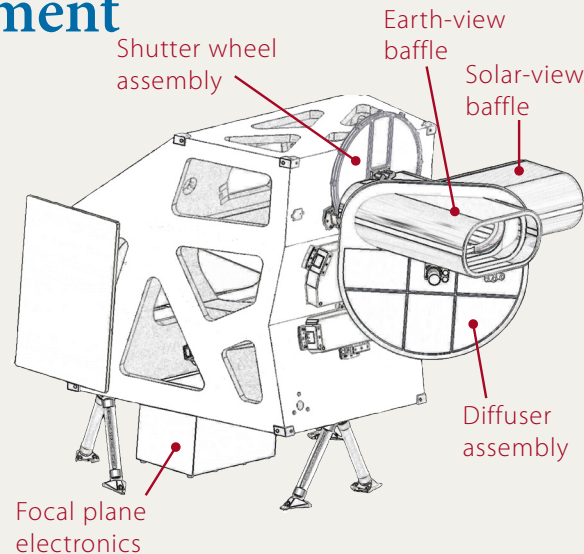


The spacecraft supplies power, orbit and attitude control, communications, and data storage for OLI and TIRS. The spacecraft consists of the mechanical subsystem (primary structure and deployable mechanisms), command and data handling subsystem, attitude control subsystem, electrical power subsystem, radio frequency (RF) communications subsystem, the hydrazine propulsion subsystem, and thermal control subsystem. The spacecraft was built by Orbital Sciences Corporation.

Hardware

The OLI Instrument

The Operational Land Imager (OLI) is a “pushbroom” sensor that will use long detector arrays, with over 7000 detectors per spectral band, aligned across its focal plane to view across its 185 kilometer (115 mile) swath. Its images will have 15 meter (49 feet) panchromatic and 30 meter (98 feet) multispectral spatial resolutions. The OLI has a five-year design life and will detect the same spectral bands as earlier Landsat instruments with the exception of a thermal infrared band. In addition to the heritage Landsat multispectral bands, OLI will add two new spectral bands—a blue “coastal” band (band 1) and a shortwave-infrared “cirrus” band (band 9). These new bands will, respectively, help scientists measure water quality and help detect high, thin clouds. OLI was built by Ball Aerospace & Technologies Corporation.



The TIRS Instrument

The Thermal Infrared Sensor (TIRS) is also a pushbroom sensor with a 185-kilometer cross-track field of view. Its spatial resolution is 100 meters (328 feet). TIRS detects energy in two thermal infrared regions. The instrument has a three-year design life. It was built in-house at NASA's Goddard Space Flight Center.

